



Confirmation of Product Type Approval

Company Name: ROXTEC INTERNATIONAL AB

Address: ROMBVAGEN 2 LYCKEBY SE 371 65 Sweden

Product: Penetration Device for Pipe Deck and Bulkhead Penetration Sealing

Model(s): Roxtec RS PPS and RS PPS/S Seals in Aluminium Divisions

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	23-2456071-PDA	20-NOV-2023	19-NOV-2028
Manufacturing Assessment (MA)	24-6227546	25-JAN-2024	08-JAN-2029
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

Single plastic pipe penetrations in Class A0, A15, A30 and A60 aluminium bulkheads and decks for marine and offshore applications. Penetrations of watertight and gastight aluminium bulkheads and decks up to the specified pressure.

Description

RS PPS - Consisting of an extended aluminium sleeve bolted or welded to an aluminium section. The sleeve is fitted at both ends with Roxtec RS seals (standard or EMC versions) including inserted intumescent material in between.

RS PPS/S - Consisting of an aluminium sleeve, bolted, welded or SLX-type sleeve attached through expansion, on to the steel sections. The sleeve is fitted with one single RS PPS/S seal with integrated intumescent material. Minimum thickness for aluminium sleeve is 1.5 mm.

Ratings

A0, A15, A30 and A60 Bulkheads and Decks

RS PPS

Watertight test pressure 6 bar (except bolted versions test pressure at 5 bar)

Gastight test pressure 4 bar (except bolted versions test pressure at 2.5 bar)

RS PPS/S

Watertight test pressure 6 bar (except bolted versions test pressure at 5 bar)

Gastight test pressure 3 bar (except bolted versions test pressure at 2.5 bar)

Service Restrictions

a) Maximum and Minimum tested RS PPS:

- PVC: 16 mm to 160mm outside diameter.
- PE Pipe: 16 mm to 355mm outside diameter.
- PE/ALU/PE flexible pipe: 16 mm to 110mm outside diameter.
- Coolfit 4.0 Pipe: 90 mm to 315mm outside diameter.

b) Maximum and Minimum tested RS PPS/S:

- PE Pipe: 16 mm to 110mm outside diameter.
- PE/ALU/PE flexible pipe: 16 mm to 63mm outside diameter.
- Coolfit 2.0 Pipe: 75 mm to 110mm outside diameter.

c) Maximum / Minimum Size of Transit Frame tested :

- RS PPS 200 / RS PPS 31 for PVC pipes
- RS PPS 450 / RS PPS 31 & RS PPS/S 150 / RS PPS/S 31 for PE pipes.
- RS PPS 150 / RS PPS 31 & RS PPS/S 100 / RS PPS/S 31 for PE/ ALU/ PE flexible pipes.
- RS PPS 400 / RS PPS 125 for Coolfit 4.0 Pipe
- RS PPS/S 150 / RS PPS/S 125 for Coolfit 2.0 Pipe

d) For frame arrangements larger than those tested, special approval is to be requested.

e) Not for use in tank boundaries.

f) For fire class A-0, A-15 and A-30, sleeves are to be insulated as for class A-60 and in addition the division is to be insulated at least 200 mm around the penetration.

g) Unit Certification is not required for this product. If the manufacturer or purchaser's request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments

a) All seal type should be installed in accordance with the manufacturers instructions and ABS approved installation drawings.

b) Insulation material is to be A60 approved type and properly installed in accordance with ABS approved drawings to the satisfaction of the Surveyors.

c) Watertight bulkheads or decks are to be tested as per ABS Marine Vessel Rules 3-7-1/Table 1.

d) When requested to be used in watertight bulkheads on passenger ships or special purpose ships, the penetration system has to comply with the requirements given in SOLAS Ch. 11-1 Reg. 13.2.3 (2020 Consolidated Edition).

e) This approval of penetrations passing through watertight bulkhead is not to be construed as a substitute for flag Administration's approval for the purpose of SOLAS 74/78 (2020 Consolidated

Edition).

f) The product or packing is to be marked with name of manufacturer, type designation and fire rating.

g) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation

Installation instructions, RS PPS

Installation instructions, RS PPS/S

Test Matrix, RS PPS

Test Matrix, RS PPS/S

CTO, Fire test report, RS-22/B-246/E, dated 02 January 2023

CTO, Fire test report, RS-20/B-408/E, dated 02 January 2023

DBI, Fire test report, PGB10016A, dated 27 February 2023

DBI, Fire test report, PGB10076A, dated 04 January 2023

DBI, Fire test report, PGB10031A, dated 27 February 2023

DBI, Fire test report, PGA11371A, dated 20 February 2019

CTO, Fire test report, RS-19/B-224/E, dated 01 August 2019

CTO, Fire test report, RS-20/B-082/E, dated 21 April 2019

CTO, Fire test report, RS-19/B-020/E, dated 27 May 2019

DBI, Fire test report, PGA11370A, dated 20 February 2019

ROXTEC, Tightness report, SKM-04-4088, dated 16 June 2004

ROXTEC, Tightness report, N141ZEM1, dated 15 May 2020

ROXTEC, Tightness report, MLM070656, dated 18 April 2007

ROXTEC, Tightness report, N141ZEM2, dated 15 May 2010

ROXTEC, Tightness report, MLM020408-23, dated 03 June 2002

Certificate drawing, S1595597, RS PPS with A60 Aluminium Deck

Certificate drawing, S1595650, RS PPS/S with A60 Aluminium Deck & Bulkhead

Certificate drawing, S1595633, RS PPS with A60 Aluminium Bulkhead

DBI, Fire test report, PGA10802A, PGA 10801A both dated 29 August 2016

ROXTEC, Tightness report, MLM 010247, dated 29 September 2001

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 19/Nov/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

ABS Rules for Marine Vessel (2023) 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-3/7.11

ABS Rules for Mobile Offshore Units (2023) 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-2/7.7.4

International Standards

Regulation II-2/ 9.3.1 of SOLAS (2020 Consolidated Edition)

IMO Resolution MSC.307(88) - (2010 FTP Code), Annex I: Part 3, adopted on 3 December 2010

EU-MED Standards

NA

National Standards

NA

Government Standards

This PDA conforms to Transport of Canada requirements as per Transport Canada Policy Letter A8706-1 RDIMS#1961446 dated 15 November 2006

Other Standards

NA



A handwritten signature in blue ink, appearing to read 'James W. ...', is positioned above the printed name and title.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 13-Feb-2024 1:20

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the

product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.